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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,287

05/19/2005

Hansjorg Klock

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EXAMINER

WANG, CLAIRE X

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

06/12/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/530,287	Applicant(s) KLOCK ET AL.	
	Examiner CLAIRE WANG	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1-8 and 10-14 are objected to because of the following informalities: the word "characterised" should be changed to "characterized". Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1-14 are rejected under 35 U.S.C. 112 second paragraph.
4. Claims 1 and 9 recite the limitation "said points" in lines 11 and 12. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (6,040,584 hereinafter "Liu") in view of Laskowski et al. (6,101,266 hereinafter "Laskowski").

As to claim 1, Liu teaches a method for optically detecting a processing one or more types of sheet-like objects, particularly banknotes (method and for system for detecting damaged bills; Title), characterized in that said sheet-like objects (test bill; 400 Fig. 5) are illuminated (light emitting devices; 310 320 Fig. 5), a transmission image of a specific sheet-like object of said sheet-like objects is produced by measuring transmission intensities of light transmitted through regions of said specific object (form one or more transmitted light intensity images; s1400 Fig. 11) and a reflection image is produced by measuring reflection intensities of light reflected from the said regions of said specific object (reflected light intensity images has been generated; Col. 10, lines 32-34) , a first dimension of said two-dimensional evaluation method being formed by said transmission intensities (see vertical axis in Fig. 17) and a second dimension of said two-dimensional evaluation method being formed by said reflection intensities (see horizontal in Fig. 17), and wherein the two-dimensional evaluation method further

Art Unit: 2624

comprises determining the location of said points in said two dimensions, and comparing said locations with a linear decision boundary (Fig. 17 shows a plot of points in 2-dimensions graph showing both reflection and transmission). However, Liu does not teach that the above two-dimensional method mentioned above is used for detecting double feed detection.

Laskowski teaches a method and apparatus determining conditions of banknotes (Title), wherein the condition could be double notes (Col. 4, lines 51-52). Furthermore, Laskowski uses both reflectance and transmission (20 and 22 Fig. 1). Thus, the double note detection of Laskowski reads on the claimed double note detection. Therefore, it would have been obvious for one ordinarily skilled in the art at the time the invention was made to combine Liu's two-dimensional currency handling system using reflectance and transmission as both axis with the double note detection of Laskowski, since the use of reflectance and transmission is also taught by Laskowski but just not used in a two-dimensional graph of Liu therefore it would be a simple substitution by applying the methods of Liu to detect double notes.

As to claim 2, Laskowski teaches characterized in that said sheet-like objects are sequentially fed into said apparatus and conveyed along a transport path in a moving direction where first a position (belt-like transport; 12 Fig. 1) and an angle of a specific sheet-like object with respect to said transport path are determined and where second said specific sheet-like object passes a multitude of sensor cells arranged in at least one line being perpendicular to said moving direction (reflectance sensors and transmission sensors are perpendicular to the belt; 20 22, Fig. 1), said transmission intensities and said reflection intensities being measured by determining a multitude of sensor values for each sensor cell in fast succession while said specific sheet-like object passes said sensor cells (reflectance sensors and transmission sensors are perpendicular to the belt; 20 22, Fig. 1).

As to claim 3, Liu teaches characterized in that said sheet-like objects are illuminated with infra-red light (exposed to infrared emitted light; Col. 13, line 40).

As to claim 4, Liu teaches characterized in that a set of dedicated test spots is determined for said specific object and said two-dimensional evaluation for said specific sheet-like object is solely carried out for said set of test spots (Fig. 17 shows different plotted points or sample spots).

As to claim 5, Liu teaches characterized in that said test spots are defined by image processing said transmission image and said reflection image, thereby considering said position, said angle and known parameters of an object type of said specific sheet-like object (Fig. 17).

As to claim 6, Laskowski teaches characterized in that said test spots are determined such that they are positioned outside of an exclusion area of said specific object, said exclusion area comprising at least one of the following object areas: a) an area of said specific object with a dark print, a foil, a hologram or a thread, (the darkness of the surface of note affects both magnitudes of the radiation reflected from and the radiation transmitted through a banknote; Col. 16, lines 27-34). (Note: the steps of b and c are not taken into consideration since they are linked with “or” they are considered to be an option. If Applicant wishes to include limitations b and c, Examiner suggests Applicant changing the “or” to “and”)

As to claim 7, Liu teaches characterized in that said test spots are grouped in a plurality of overlapping regions of said specific object, where first an independent double feed detection result is determined for each region and second an overall double feed detection result is determined by combining said independent double feed detection results of each region (Fig. 17 shows different regions in which the plotted points are grouped and depending on where each point is located the system will determine the condition of the banknote).

As to claim 8, Laskowski teaches characterized in that said specific object is validated in a first step and said double feed is detected in a second step only if said specific object has correctly been validated (identify a banknote; Col. 2, lines 29-30), where said object type of said specific object is determined during said first step of validating said specific object (identifying whether or not a banknote is a double note; Col. 4, lines 50-52).

As to claims 9-14, they are the apparatus claim of the method claims listed above. Thus, it is analyzed in the same way as the above claims. Please see above for details.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLAIRE WANG whose telephone number is (571)270-1051. The examiner can normally be reached on Mid-day flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Claire Wang
06/08/2008
/Brian Q Le/
Primary Examiner, Art Unit 2624